Rejection of Claims 2-6, 11-15, 18, 23 and 24 Under 35 U.S.C. §112, Second Paragraph

Claims 2-6, 11-15, 18, 23 and 24 are rejected under 35 U.S.C. §112, second paragraph "as being indefinite for failing to particularly point out and distinctly claim the subject matter which" Applicants regard as the invention (Office Action, page 3). Applicants note, however, that Claim 14, which depends from Claim 1, appears to be mistakenly included in this rejection. Clarification is respectfully requested.

Claims 2 and 6 are rejected by the Examiner for the phrase "said promoter" having insufficient antecedent basis (Office Action, page 3).

Applicants have amended Claims 2 and 6 to recite "said one or more promoters" which has antecedent basis in Claim 1.

Claims 3-5, 23 and 24 are rejected by the Examiner for the phrase "said coding sequence" having insufficient antecedent basis.

Applicants have amended Claims 3-5, 23 and 24 to recite "said one or more coding sequences" which has antecedent basis in Claim 1.

Claim 11 is rejected by the Examiner for being "indefinite in that the components of the retroviral vector system are unclear." (Office Action, page 3).

Applicants have amended Claim 11 to clarify the claimed invention, as the Examiner suggested.

As amended, Applicants' claimed invention is particularly pointed out and distinctly claimed. Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Anne J. Collins

Anne J. Collins
Registration No.: 40,564
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Dated: October 15, 2002

MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

2. (Amended) The retroviral vector according to claim 1, wherein said [promoter] one or more promoters is inserted within the U5 region of the 5' LTR.

3. (Amended) The retroviral vector according to claim 1, wherein said one or more coding [sequence] sequences is inserted within the U3 region of the 3' LTR.

4. (Twice Amended) The retroviral vector according to claim 1, wherein said one or more coding [sequence] sequences comprises DNA which is heterologous to the vector.

5. (Twice Amended) The retroviral vector according to claim 4, wherein said one or more coding [sequence] sequences is selected from one or more elements of the group consisting of marker genes, therapeutic genes, antiviral genes, antitumour genes, cytokine genes, toxin genes and combinations thereof.

6. (Twice Amended) The retroviral vector according to claim 1, wherein said [promoter] one or more promoters is a constitutive promoter.

10. (Twice Amended) A recombinant retroviral vector system comprising [a retroviral vector comprising]

a) a retroviral vector comprising one or more promoters inserted in antisense orientation within the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus

in a fashion where the promoter is located upstream of the coding sequence and drives expression of the coding sequence, and

b) a packaging cell line harbouring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged.

11. (Twice Amended) A retroviral particle produced by transfecting a packaging cell line of a retroviral vector system [comprising] with

[a)] a retroviral vector comprising one or more promoters inserted in antisense orientation within the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus in a fashion where the promoter is located upstream of the coding sequence and drives expression of the coding sequence, and

[b) a packaging cell line harbouring at least one retroviral construct coding for proteins required for said retroviral vector to be packaged]

isolating the resulting retroviral particle.

13. (Amended) An mRNA of a retroviral provirus according to claim 12.

14. (Amended) An RNA of a retroviral vector according to claim 1.

22. (Amended) A retroviral vector comprising one or more promoters inserted in antisense orientation within the U5 region of the 5' long terminal repeat (LTR) region and one or more coding sequences inserted in antisense orientation within the U3 region of the 3' LTR region, both the promoter as well as the coding sequence inserted in such a way as to ensure that the promoter and the coding sequence become duplicated during the process of reverse transcription in a target cell and appear in the 3' as well as in the 5' LTR region of the resulting provirus in a fashion wherein the promoter is [inserted within the U5 region of the 5'

LTR,] located upstream of the coding sequence [is inserted within the U3 region of the 3' LTR and the promoter] and drives expression of the coding sequence.

23. (Amended) The retroviral vector according to claim 22, wherein said [coding sequence] one or more sequences comprises DNA which is heterologous to the vector.

24. (Amended) The retroviral vector according to claim 23, wherein said [coding sequence] one or more sequences is selected from one or more elements of the group consisting of marker genes, therapeutic genes, antiviral genes, antitumour genes, cytokine genes, toxin genes and combinations thereof.